

MICHIGAN WATER RESOURCES COMMISSION
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Act"), and the Michigan Water Resources Commission Act, as amended, (Act 245, Public Acts of 1929, as amended, the "Michigan Act"),

Pennwalt Corporation

is authorized to discharge from a facility located at

4655 Biddle Avenue
Wyandotte, Michigan 48912



designated as Pennwalt Corp

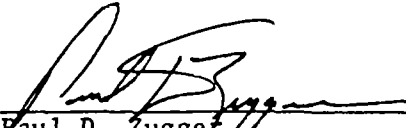
to the receiving water named the Detroit River Trenton Channel in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I and II hereof.

This permit takes effect immediately upon the date of issuance. Any person who feels aggrieved by this permit may file a sworn petition with the Commission, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Commission may reject any petition filed more than 60 days after issuance as being untimely. Upon granting of a contested case to the applicant, the Commission shall review the permit to determine which contested term shall be stayed until the Commission takes its final action. All other conditions of the permit remain in full effect. If the contested condition is a modification of a previous permit condition and the Commission determines the contested condition shall be stayed, then such previous condition remains in effect until the Commission takes final action. During the course of any administrative proceeding brought by a person other than the applicant, the conditions of this permit will remain in effect, unless the Commission determines otherwise.

This permit and the authorization to discharge shall expire at midnight October 1, 1992. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Michigan Water Resources Commission no later than 180 days prior to the date of expiration.

This permit is based on an application dated March 31, 1987, as amended, and referencing information submitted with prior applications, and shall supersede any and all Orders of Determination, Stipulation, Final Orders of Determination, or NPDES permits previously adopted by the Michigan Water Resources Commission.

Issued this 15th day of September, 1988, by the Michigan Water Resources Commission. superseding NPDES Permit No. MI0002381, expiring October 1, 1987.



Paul D. Zugger
Executive Secretary

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Interim Effluent Limitations

Beginning on the date of permit issuance and lasting until March 31, 1989, the permittee is authorized to discharge a maximum of fourteen million seven hundred twenty thousand (14,720,000) gallons per day of organic and inorganic process water, barometric condenser cooling water, boiler blowdown, noncontact cooling water, and an unspecified quantity of stormwater runoff from outfall 001 (formerly outfall 006) to the Detroit River Trenton Channel via Monguagon Creek. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Limitations		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum		
Flow (MGD)					Daily	Report Total Daily Flow
Total Suspended Solids	1716	4536	14 mg/l	37 mg/l	3x Weekly	24-hr Comp
BOD ₅	1457	2773			3x Weekly	24-hr Comp
Total Zinc			105 ug/l	190 ug/l	2x Monthly	24-hr Comp
Total Residual Chlorine				0.036 mg/l	3x Weekly	Grab
Phenol				0.2 mg/l	Weekly	24-hr Comp
Ammonia as Nitrogen (mg/l)			Monitor		Weekly	24-hr Comp
Chlorides (mg/l)			Monitor		3x Weekly	24-hr Comp
Temperature (°F)			Monitor		3x Weekly	Reading
Outfall Observation					Daily	Visual
				<u>Minimum</u>		
Dissolved Oxygen				4.0 mg/l	3x Weekly	Grab

a. The receiving stream shall contain no unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or deposits as a result of this discharge.

b. Samples, measurements, and observations taken in compliance with the monitoring requirements above shall be taken prior to the discharge to Monguagon Creek.

c. The pH shall not be less than 6.5 nor greater than 9.0, except as provided below. The pH shall be monitored as follows: continuous; report minimum and maximum; reading: daily. In addition, the permittee shall report each excursion from the allowable range of 6.5 to 9.0 on an individual occurrence and monthly cumulative basis. The total time during which the pH values are outside the pH values of 6.5 to 9.0 shall be no more than 7 hours and 26 minutes in any calendar month, and no single excursion shall exceed 60 minutes. The discharge shall be within the range of 6.0 to 10.5, 100% of the time.

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d. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids or deposits) shall be reported immediately to the Detroit District Office of the Surface Water Quality Division followed with a written report within 5 days detailing the findings of the investigation and the steps taken to correct the condition.

e. In the event the permittee shall require the discharge of water treatment additives, the permittee shall notify the Chief of the Surface Water Quality Division. The permittee shall obtain written approval from the Chief of the Surface Water Quality Division to discharge such additives at a specified level. The permit may be modified in accordance with the requirements of Part II.B.4 if a constituent of the additive or additives requires limiting.

f. The term noncontact cooling water shall mean water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product, or finished product.

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Final Effluent Limitations

Beginning on March 31, 1989, and lasting until the expiration date of this permit, the permittee is authorized to discharge a maximum of fourteen million seven hundred twenty thousand (14,720,000) gallons per day of organic and inorganic process water, barometric condenser cooling water, boiler blowdown, noncontact cooling water, and an unspecified quantity of stormwater runoff from outfall 001 (formerly outfall 006) to the Detroit River Trenton Channel via Monguagon Creek. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	lbs/day		Other Limitations		Measurement Frequency	Sample Type
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum		
Flow (MGD)					Daily	Report Total Daily Flow
Total Suspended Solids	1568	4525			3x Weekly	24-hr Comp
BOD ₅	1039	2773			3x Weekly	24-hr Comp
Total Zinc	12.9	23.3	105 ug/l	190 ug/l	2x Monthly	24-hr Comp
Total Residual Chlorine				0.036 mg/l	3x Weekly	Grab
Phenol	0.45	1.1	4 ug/l	9 ug/l	Weekly	24-hr Comp
Ammonia as Nitrogen (mg/l)			Monitor		Weekly	24-hr Comp
Chlorides (mg/l)			Monitor		3x Weekly	24-hr Comp
Temperature (°F)			Monitor		3x Weekly	Reading
Outfall Observation					Daily	Visual
				<u>Minimum</u>		
Dissolved Oxygen				4.0 mg/l	3x Weekly	Grab

a. The receiving stream shall contain no unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or deposits as a result of this discharge.

b. Samples, measurements, and observations taken in compliance with the monitoring requirements above shall be taken prior to the discharge to Monguagon Creek.

c. The pH shall not be less than 6.5 nor greater than 9.0, except as provided below. The pH shall be monitored as follows: continuous; report minimum and maximum; reading: daily. In addition, the permittee shall report each excursion from the allowable range of 6.5 to 9.0 on an individual occurrence and monthly cumulative basis. The total time during which the pH values are outside the pH values of 6.5 to 9.0 shall be no more than 7 hours and 26 minutes in any calendar month, and no single excursion shall exceed 60 minutes. The discharge shall be within the range of 6.0 to 10.5, 100% of the time.

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d. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids or deposits) shall be reported immediately to the Detroit District Office of the Surface Water Quality Division followed with a written report within 5 days detailing the findings of the investigation and the steps taken to correct the condition.

e. In the event the permittee shall require the discharge of water treatment additives, the permittee shall notify the Chief of the Surface Water Quality Division. The permittee shall obtain written approval from the Chief of the Surface Water Quality Division to discharge such additives at a specified level. The permit may be modified in accordance with the requirements of Part II.B.4 if a constituent of the additive or additives requires limiting.

f. The term noncontact cooling water shall mean water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product, or finished product.

g. The above limitations for total suspended solids may be modified to a Net value upon demonstration to the Chief of the Surface Water Quality Division that gross values are unattainable. The permittee shall make a net demonstration according to 40 CFR, Part 122.

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3. Special Condition - Reopener Clause

This permit may be modified or, alternatively, revoked and reissued to comply with any applicable standard(s) or limitation(s) promulgated under Section 301(b)(2)(c)(d), 304(b)(2) and 307(a)(2) of the Act, if the effluent standard(s) or limitation(s) so promulgated:

- a. is(are) either different in condition or more stringent than any effluent limitation in the permit; or
- b. control(s) any pollutant not limited in the permit.

4. Special Condition - Notification Requirement

The discharger shall notify the Chief of the Surface Water Quality Division, in writing, within 10 days of knowing, or having reason to believe, that a change in facility operation, sewerage system users, maintenance, or construction has resulted or will result in the discharge of:

- a. Detectable levels* of chemicals on the current Michigan Critical Materials Register or priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, which were not acknowledged in the application** or listed in the application at less than detectable levels.
- b. Detectable levels* of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information.
- c. Any chemical at levels greater than five times the average level reported in the application**.

Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the schedule of compliance.

*The detectable level shall be defined as the Method Detection Limit (MDL) as given in Appendix B to Part 136, Federal Register, Vol. 49, No. 209, October 26, 1984, pp. 43430-31.

**The application dated March 31, 1987, as amended, and referenced information submitted with prior applications.

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5. Special Condition - BAT Monitoring

As a condition of this permit, the permittee shall monitor the discharge from outfall 001 for the constituents listed below using approved test procedures established by the federal regulations "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act", 40 CFR Part 136. This monitoring is designed to determine whether these constituents are discharged and, therefore require effluent limitations under the federal regulations entitled "Organic Chemicals and Plastics and Synthetic Fibers Category Effluent Limitations Guidelines", 40 CFR Parts 414 and 416. Grab samples shall be taken for the constituents twice a year, for the life of this permit. The results of the analysis of such monitoring shall be submitted to the Chief of the Surface Water Quality Division in accordance with Part I.C.2, Schedule of Compliance. If, upon review of the analysis, it is determined that any of the materials or constituents require limiting in accordance with applicable water quality or technology standards, the permit may then be modified after public notice and Commission approval of the recommended permit modification in accordance with Part II.B.4. The reissuance of this permit does not authorize the discharge of any of the constituents listed below:

Volatile Compounds

acrylonitrile	benzene	carbon tetrachloride
chlorobenzene	chloroethane	chloroform
1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethylene
1,2-dichloropropane	1,3-dichloropropylene	ethylbenzene
methyl chloride	methylene chloride	tetrachloroethylene
toluene	1,2-trans-dichloroethylene	1,1,1-trichloroethane
trichloroethylene	1,1,2-trichloroethane	vinyl chloride

Acid Compounds

2,4-dimethylphenol	4,6-dinitro-o-cresol	2,4-dinitrophenol
2-nitrophenol	4-nitrophenol	

Base/Neutral Compounds

acenaphthene	acenaphthylene	anthracene
benzo(a)anthracene	benzo(a)pyrene	3,4-benzofluoranthene
benzo(k)fluoranthene	bis(2-chloroisopropyl)ether	bis(2-ethylhexyl)phthalate
chrysene	1,2-dichlorobenzene	1,3-dichlorobenzene
1,4-dichlorobenzene	diethyl phthalate	dimethyl phthalate
di-n-butyl phthalate	fluoranthene	fluorene
hexachlorobenzene	hexachlorobutadiene	hexachloroethane
naphthalene	nitrobenzene	phenanthrene
pyrene	1,2,4-trichlorobenzene	

Other Toxic Pollutants

Total Chromium	Total Copper	Total Cyanide
Total Lead	Total Nickel	

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6. Special Condition - Intake Monitoring

Beginning on the date of issuance of this permit and lasting until the date of expiration of this permit, the permittee shall monitor the intake as specified below:

<u>Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
BOD5	3x Weekly	24-hr Composite
Total Suspended Solids	3x Weekly	24-hr Composite
Chlorides	3x Weekly	24-hr Composite

a. Samples to be taken in compliance with the monitoring requirements above shall be taken of the intake after initial screening or pre-process treatment.

b. Results of monitoring and analysis shall be submitted to the Detroit District Supervisor of the Surface Water Quality Division.

7. Special Condition - Short Term Intake-Discharge Study

As a condition of this permit, the permittee shall monitor both the intake and the discharge from outfall 001 for the constituents, at the frequency, and for at least the duration specified below. This monitoring is designed to determine whether these constituents are discharged in significant quantities. The results of the analysis of such monitoring shall be submitted to the Chief of the Surface Water Quality Division in accordance with Part I.C.3., Schedule of Compliance. If, upon review of the analysis, it is determined that any of the materials or constituents require limiting to protect the receiving waters in accordance with applicable water quality standards, the permit may then be modified after public notice and Commission approval of the recommended permit modification in accordance with Part II.B.4.

<u>CONSTITUENT</u>	<u>SAMPLE TYPE</u>	<u>SAMPLE FREQUENCY</u>	<u>DETECTION LEVEL</u>	<u>SAMPLE DURATION</u>
Total Cadmium	24-hr Comp	Weekly	0.2 ug/l	Two Weeks
Total Chromium	24-hr Comp	Weekly	10 ug/l	Two Weeks
Hexavalent Chromium	24-hr Comp	Weekly	5 ug/l	Two Weeks
Total Copper	24-hr Comp	Weekly	0.2 ug/l	Two Weeks
Amenable Cyanide	24-hr Comp	Weekly	5 ug/l	Two Weeks
Total Lead	24-hr Comp	Weekly	1 ug/l	Two Weeks
Total Mercury	24-hr Comp	Weekly	0.5 ug/l	Two Weeks
Total Nickel	24-hr Comp	Weekly	50 ug/l	Two Weeks
Total Zinc	24-hr Comp	Weekly	50 ug/l	Two Weeks
Total Silver	24-hr Comp	Weekly	0.2 ug/l	Two Weeks
PCB's	24-hr Comp	Weekly		Two Weeks
Ammonia as Nitrogen	24-hr Comp	Weekly		Two Weeks
pH	24-hr Comp	Weekly		Two Weeks

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8. Special Condition - Groundwater Discharge Not Authorized

The reissuance of this permit does not authorize any discharges to the groundwaters. Such discharges must be authorized by a groundwater discharge permit issued pursuant to Act 245, Public Acts of 1929, as amended.

9. Special Condition - Short Term Waste Characterization Study

As a condition of this permit, the permittee shall monitor wastewaters from processes 21, 45, and 47 prior to mixing with noncontact cooling water (which is discharged at the end of the final pond) and at outfall 001, at a minimum, for the constituents associated with each process, at the frequency, and for the duration specified below. This monitoring is designed to determine whether these constituents are discharged in significant quantities. The results of the analysis of such monitoring shall be submitted to the Chief of the Surface Water Quality Division in accordance with Part I.C.4., Schedule of Compliance. If, upon review of the analysis, it is determined that any of the materials or constituents require limiting to protect the receiving waters in accordance with applicable water quality standards, the permit may then be modified after public notice and Commission approval of the recommended permit modification in accordance with Part II.B.4.

<u>CONSTITUENT</u>	<u>SAMPLE TYPE</u>	<u>SAMPLE FREQUENCY</u>	<u>SAMPLE DURATION</u>
monoethylamine	Grab	Weekly	*Two Weeks
diethylamine	Grab	Weekly	*Two Weeks
triethylamine	Grab	Weekly	*Two Weeks
mono, di, & tri-N-butylamine	Grab	Weekly	*Two Weeks
N, di, and tripropylamine	Grab	Weekly	*Two Weeks
ammonia	Grab	Weekly	*Two Weeks
diethylhydroxylamine	Grab	2x Weekly	*One Week
methyl amine	Grab	2x Weekly	*One Week
diethylaminoethanol	Grab	2x Weekly	*One Week
methyldiethanolamine	Grab	2x Weekly	*One Week
methylethanolamine	Grab	2x Weekly	*One Week
pH	Grab	Weekly	*Two Weeks
flow	Reading or Estimate	Weekly	*two Weeks

* During operation of processes identified above.

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B. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting:

DMR Submittal Requirements - The permittee shall submit Discharge Monitoring Report (DMR) forms to the Michigan Department of Natural Resources, Surface Water Quality Division, Data Entry Unit, P.O. Box 30028, Lansing, Michigan, 48909, for each calendar month of the authorized discharge period(s). The DMRs shall be postmarked no later than the 10th day of the month following each month of the authorized discharge period.

3. Definitions

a. The monthly average discharge is defined as the total discharge by weight, or concentration if specified, during the reporting month divided by the number of days in the reporting month that the discharge from the production or commercial facility occurred. When less than daily sampling occurs, the monthly average discharge shall be determined by the summation of the measured daily discharges by weight, or concentration if specified, divided by the number of days during the reporting month when the samples were collected, analyzed and reported.

b. The daily maximum discharge means the total discharge by weight, or concentration if specified, during any calendar day.

c. The Regional Administrator is defined as the Region V Administrator, U.S. EPA, located at 230 South Dearborn, 13th Floor, Chicago, Illinois, 60604.

d. The Michigan Water Resources Commission is located in the STEVENS T. MASON BUILDING. The mailing address is P.O. Box 30028, Lansing, Michigan, 48909.

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4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(h) of the Act, under which such procedures may be required.

5. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Operating Report. Such increased frequency shall also be indicated.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Michigan Water Resources Commission.

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C. SCHEDULE OF COMPLIANCE

1. The permittee shall continue to operate the installed facilities to achieve the effluent limitations specified for outfall 001.
2. On or before April 1st and October 1st of each year, during the effectiveness of this permit, the permittee shall submit the analytical results required in the BAT Monitoring Section, Part I.A.4. of this permit. The analytical results shall be submitted to the Chief of the Surface Water Quality Division.
3. The permittee shall achieve compliance with the Short Term Intake-Discharge Study requirements specified in Part I.A.7., in accordance with the following schedule. All submittals shall be to the Chief of the Surface Water Quality Division.
 - a. On or before October 31, 1988, the permittee shall submit and receive approval of a monitoring, sampling, and analysis plan.
 - b. On or before February 1, 1989, the permittee shall submit the analytical results of such monitoring.
4. The permittee shall achieve compliance with the Short Term Waste Characterization Study requirements specified in Part I.A.9., in accordance with the following schedule. All submittals shall be to the Chief of the Surface Water Quality Division.
 - a. On or before October 31, 1988, the permittee shall submit and receive approval of a monitoring, sampling, and analysis plan.
 - b. On or before May 31, 1989, the permittee shall submit the analytical results of such monitoring.
5. If the discharges authorized by this permit are expected to continue beyond the expiration date of this permit, the permittee is required to submit an application for reissuance to the Chief of the Surface Water Quality Division on or before April 1, 1992.
6. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit to the Chief of the Surface Water Quality Division either a report of progress or, in the case of specific actions being required by identified dates, a written statement of compliance or noncompliance. In the latter case, the statement shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement. Failure to submit the written statement is just cause to pursue enforcement action pursuant to the Commission Act and the Part 21 Rules.